

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 43855/X430	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/NZ2006/000133	International filing date (<i>day/month/year</i>) 26 May 2006	Priority date (<i>day/month/year</i>) 26 May 2005
International Patent Classification (IPC) or national classification and IPC		
Int. Cl.	A63B 69/00 (2006.01) A63C 5/16 (2006.01)	G09B 9/02 (2006.01) G09B 19/16 (2006.01)
Applicant DUBAR, Graeme Andrew et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of **6** sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (*sent to the applicant and to the International Bureau*) a total of sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 26 March 2007	Date of completion of this report 21 August 2007
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Box No. I Basis of the report

1. With regard to the language, this report is based on:

☒ The international application in the language in which it was filed☐ A translation of the international application into
translation furnished for the purposes of:

, which is the language of a

☐ international search (under Rules 12.3(a) and 23.1 (b))☐ publication of the international application (under Rule 12.4(a))☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:☒ the international application as originally filed/furnished☐ the description:

pages as originally filed/furnished

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☐ the claims:

pages as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☐ the drawings:

pages as originally filed/furnished

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☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.3. ☐ The amendments have resulted in the cancellation of:☐ the description, pages☐ the claims, Nos.☐ the drawings, sheets/figs☐ the sequence listing (*specify*):☐ any table(s) related to the sequence listing (*specify*):4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).☐ the description, pages☐ the claims, Nos.☐ the drawings, sheets/figs☐ the sequence listing (*specify*):☐ any table(s) related to the sequence listing (*specify*):5. ☐ This report has been established taking into account the rectification of an obvious mistake authorized by or notified to the Authority under Rule 91 (Rule 70.2(e)).

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 9, 11-12, 18-20, 22-23, 29-42, 45-72	YES
	Claims 1-8, 10, 13-17, 21, 24-28, 43-44	NO
Inventive step (IS)	Claims 9, 36-42, 45-72	YES
	Claims 1-8, 10-35, 43, 44	NO
Industrial applicability (IA)	Claims 1-72	YES
	Claims None	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents identified in the International Search Report:

D1: US 2003/0017922 (SACHS)
D2: US 5062629 (VAUGHAN)
D3: CA 2209030 (CURTIS et al.)
D4: KR 2002078447 (KO)

D5: US 6413197 (McKECHNIE et al.)
D6: US 4966364 (EGGENBERGER)
D7: US 2004/0138028 (HSIEH)

Novelty (N)

The invention defined in the present application relates to an activity board and more particularly to an activity board for the simulation of board sports such as skateboarding, snowboarding, snowboarding, surfing and the like. The invention as claimed includes: a board having an upper surface for supporting a user; a base portion; and a resilient support member having an upper and a lower distal end, the upper end being connected to an underside of the board and the lower distal end being connected to the base portion. *The board is characterised in that it is rotatable with respect to the base portion about three defined axes (i.e. principal rotations) between the upper surface of the board and/or the base portion.* Various embodiments of the above board are then claimed with respect to the configuration and permitted movement of the base portion.

As presently claimed a number of documents anticipate the features of the invention. D1-D3 and D5-D7 in particular each disclose all the features of independent claim 1. Each of these documents are directed towards an activity board for the simulation of board sports (balancing, simulator, exercise etc.). In each document the board is rotatable with respect to the base portion about the three defined axes. Documents D1-D3 and D5-D7 each allow for at least partial rotation about these axes, which falls within the scope of the claim. For an indication of their relevance to claim 1 see: D1, figures 2 and 11; D2, figures 1 to 3; D3, figures 1 to 3; D5, figure 2 and 5; D6, figure 1, 4 and 5; and D7, figures 5 to 10. It is noted that linear movement is prevented with respect to the connection between the resilient support members and their respective base portions in each of these documents. D1 for example utilising high tension springs as shown in figure 11 to prevent such motion.

D1, D2 and D6 each disclose that the board is rotatable about the defined first axis by a rotatable connection between the resilient support member and either the board or the base portion. The rotatable connection in each of these documents is a bearing or a shaft and rotating member (see items [7], [14] and [64] of these documents respectively).

D1-D3 and D5-D7 each also disclose a board with an elongate configuration with a major/longitudinal axis and a minor/lateral axis (see D1 [1]; D2 [10]; D3 [12]; D5 [10]; D6 [20]; and D7 [13]). D1 for example, discloses the rotation about first, second and third axis to respectively denote 'yaw', 'roll' and 'pitch' (see abstract and paragraph [0001]).

[Continued in Supplemental Box]

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Independent claims 1, 31, 34 and 46 do not appear to adequately define some special technical features of the invention, listed below. Firstly that there is "unconstrained or 360 degree rotation about the 1st (y-axis denoting yaw)"; secondly, that the board is rotatable with respect to the base portion about the 2nd (x-axis denoting roll) at both the interface between the resilient support member and the lower surface of the board and between the resilient support member and the base portion; and thirdly, that the board is rotatable with respect to the base portion about the 3rd (z-axis denoting "pitch") at both the interface between the resilient support member and the lower surface of the board and between the resilient support member and the base portion. Applicant is advised that all independent claims must define all special technical features of the invention.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box No. V

The features further defined by claims 6 to 8 are disclosed in D1-D3, D5 and D6.

Additionally:

The features of claim 10 and 13 are disclosed by D3 which presents a tilting mechanism (see [48] and [50]) interposed between the upper end of the resilient support member and the lower surface of the board, capable of providing rotation about the second/'roll' axis.

D1 (paragraph [0044]) incorporates a biasing means to bias the tilting means (or equivalent in this document) toward an equilibrium position with the board substantially level as claimed at 14.

D6 (see [26] and [28]) presents stops spaced about either side of the longitudinal board axis, located on, or acting on the lower surface of the board as claimed at 15 and 16. These stops are at least partially resilient (rubber).

D2 and D4 discloses a 'yaw' rate for a given degree of user is user-adjustable (see D2 column 3, lines 37-40; D4 drawing sheet) as claimed at 17.

D2 [12], D4 [abstract] and D5 [14] each present a base portion with laterally-enlarged ground engaging lower surface and a central connecting member connected to the lower end of the resilient member as claimed at 21 and 24. D2 and D5 further present this ground engaging lower surface to be laterally enlarged with respect to the support member and extends orthogonally therefrom (claim 25).

D1 presents a base portion including a plurality of detachable, or retractable stabilising legs, extending radially outwards from the central connecting member as claimed at 26 (see [15]). These legs extend from said central connecting member for a length equal to or greater than the length of the resilient biasing member in the first axis (see figure 2).

Independent claims 31 (and appended claims 32 to 42) are directed to an activity board with the same features as listed in claim 1. The board is further characterised in that it is rotatable with respect to the base portion about three defined axes and that the base portion is further provided with one or more wheel or roller assemblies on a lower surface. As none of the prior art teaches or fairly suggests an activity board as such, claims 31-42 are considered to meet the requirements of Article 33(2) of the PCT with regards to novelty.

In respect to independent claim 43, D3 (see figures 1 to 3) discloses an activity board assembly with the features defined in claim 1 and also including "at least one displacement assembly (see [48] and [50]) located between said lower board surface and the resilient support member." The board is characterised in that it is rotatable with respect to the base portion [14] about three defined axes and that said displacement assembly is "configured to allow at least partially translational relative movement between the board and the resilient support member at least partially along, or parallel to the second and/or third axis." Appended claim 44 is also anticipated by the disclosure of this document.

Independent claim 46 (and appended claims 47 to 69) meet the criteria set out in the PCT Article 33(2) because the prior art does not teach or fairly suggest an activity board assembly including: a board having an upper surface for supporting a user; a base portion; and a support member having an upper and lower distal ends, said upper end being connected to an underside of the board and the lower distal end being connected to the base portion, characterised in that the board is rotatable with respect to the base portion about; a first axis in a plane substantially orthogonal with the upper surface of the board and/or the base portion; a second axis substantially orthogonal to said first axis and substantially parallel to upper surface of the board and/or the base portion; a third axis orthogonal to both the first and second axis; and the base portion being adapted for constrained movement along an elongate guiding track.

[Continued in Supplemental Box]

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box No. V

It is there considered that the subject matter of claims 1-8, 10, 13-17, 21, 24-28, 43-44 is not new and does not meet the requirements of Article 33(2) PCT with regard to novelty.

Inventive Step (IS)

Claims 1-8, 10, 13-17, 21, 24-28, 43-44 also lack an inventive step for the reasons given above. Therefore the subject matter of these claims is obvious and does not meet the requirements of Article 33(3) PCT with regard to inventive step.

Independent claim 35 does not involve an inventive step in the light of any one of D1-D3 or D5-D7.

The claimed invention differs from the cited art in the provision of one or more wheel or roller assemblies on the lower surface of the base. This difference however, resides only in what is merely a choice of one of several obvious known alternatives in the art and which would be available for use by the person skilled in the art (PSA).

This choice provides the known benefit that an activity board equipment piece can be easily moved from one place to another (i.e. from where stored to where used).

The specification describes no particular problem to be overcome which would act as a barrier in applying such a known alternative without an inventive solution, nor is such a solution described. Additionally the particular selection provides no new or surprising result. Therefore this is merely an obvious choice which the PSA would arrive at by a routine and non-inventive process.

Following on from the disclosure and discussion in regard to the newness of the claimed features indicated above in the novelty section it is considered that the features further appended by dependent claims 11-12, 18-20, 22-23, 29-30 and 32-35 are considered to relate to selections that are merely a matter of design choice.

Overall it is considered that the matter of claims 1-8, 10-35 and 43-44 is obvious and does not meet the requirements of Article 33(3) PCT with regard to inventive step.

Industrial Applicability (IA)

The invention defined in claims 1 to 72 is considered to meet the requirements of Industrial Applicability under Article 33(4) PCT because it can be made by, or used in, industry.